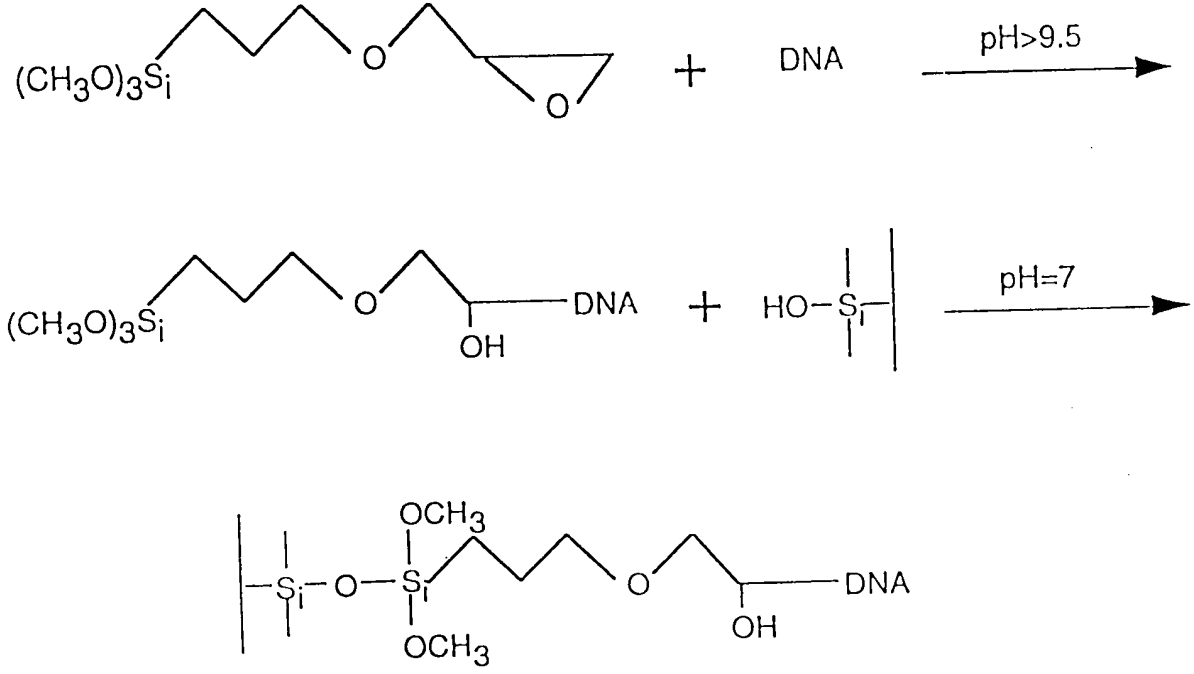
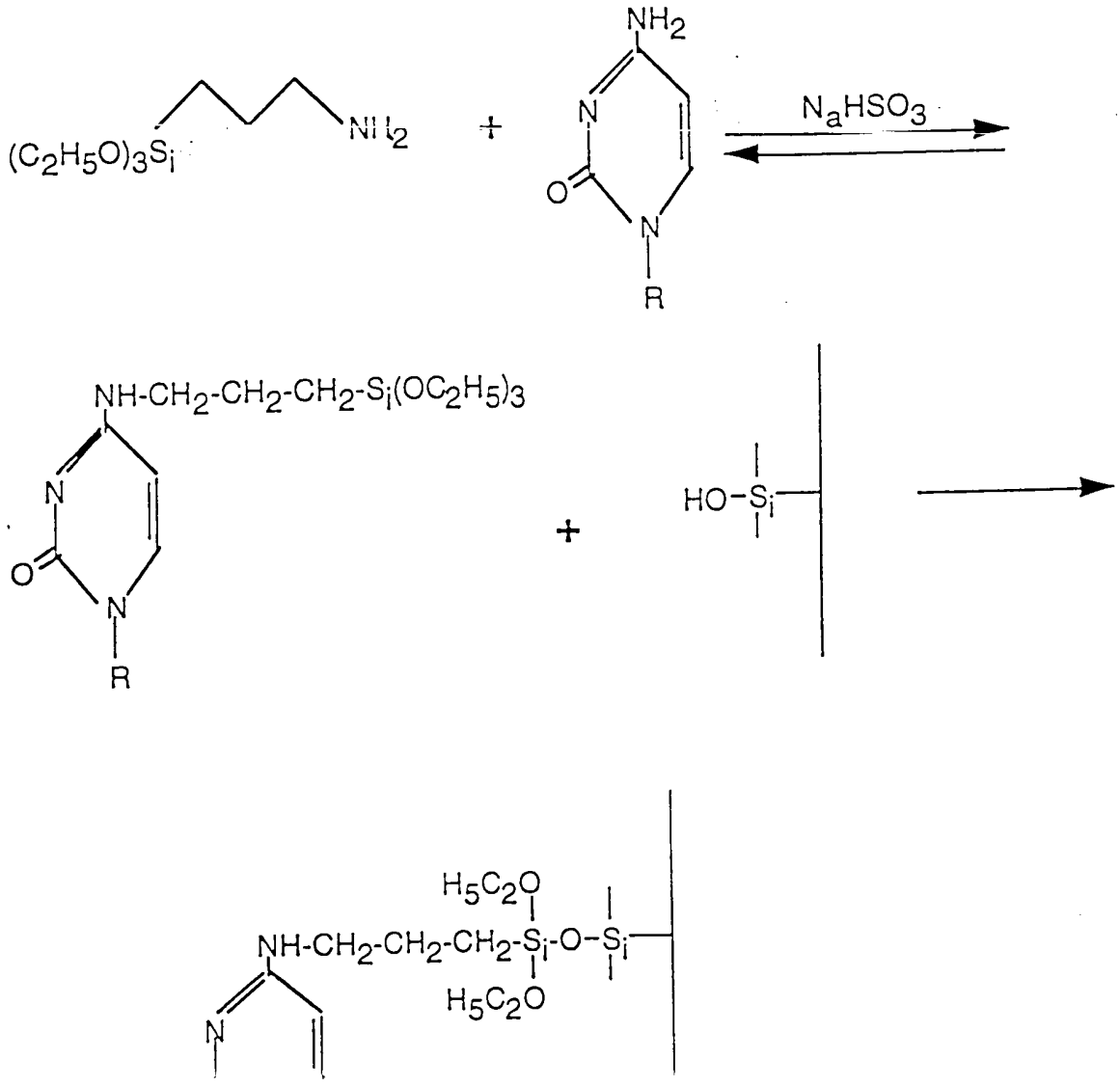
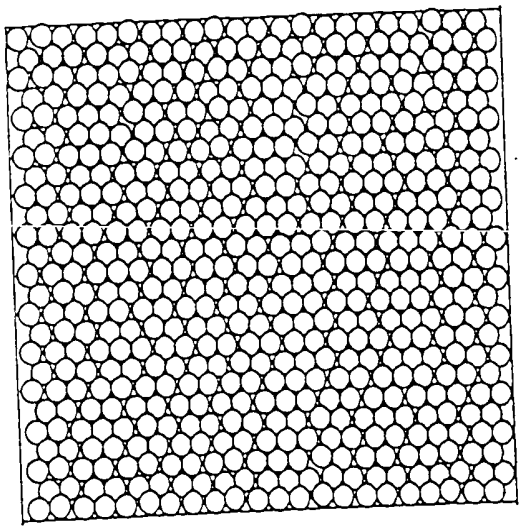

(CH3O)3Si
O
O
DNA
pH>9.5
(CH3O)3Si
O
DNA
OH
HO–Si
pH=7
OCH3
Si
O
Si
OCH3
O
DNA
OH

Fig. 1

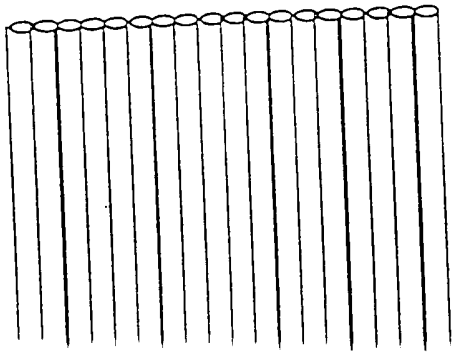
Fig. 2


NH2
(C2H5O)3Si
NH2
N
O
N
R
NaHSO3
NH-CH2-CH2-CH2-Si(OC2H5)3
N
O
N
R
HO-Si
H5C2O
NH-CH2-CH2-CH2-Si-O-Si
H5C2O
N

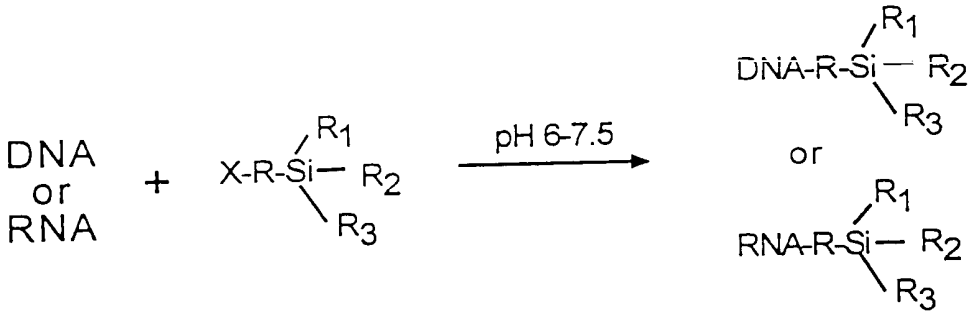


Top view

Fig. 3A



Side view



Where R is a linker, R1, R2 and R3 can be : $-OCH_3$, OC_2H_5, Cl; X=Cl, Br, or I

Figure 4

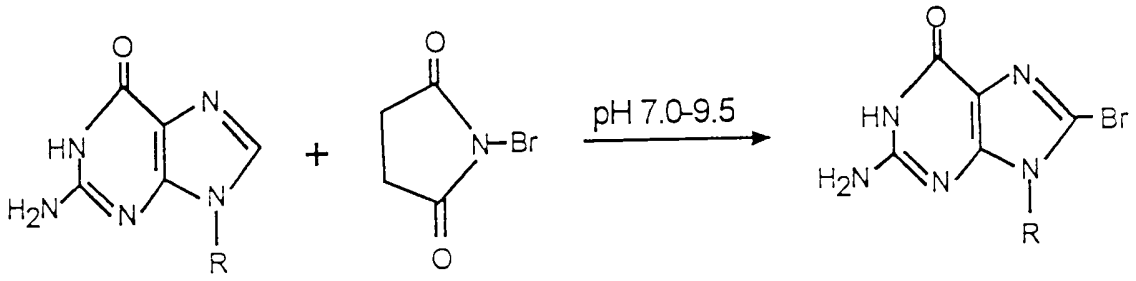


Figure 5a

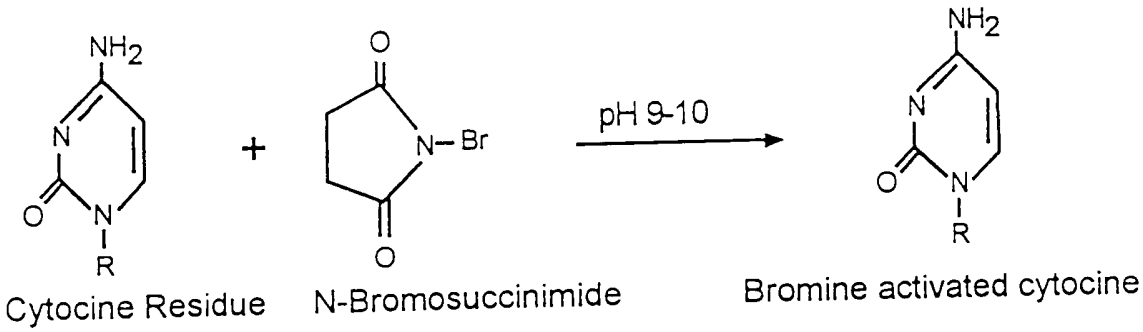


Figure 5b

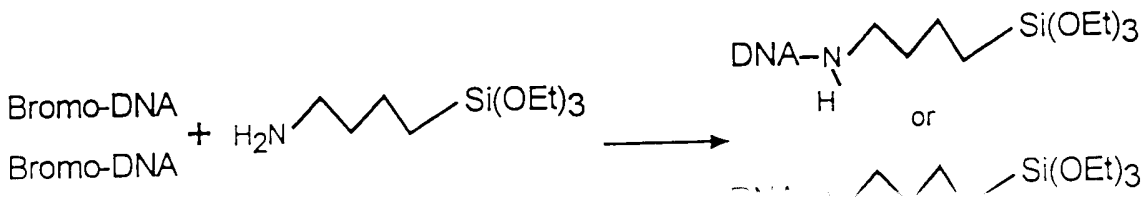


Figure 5c

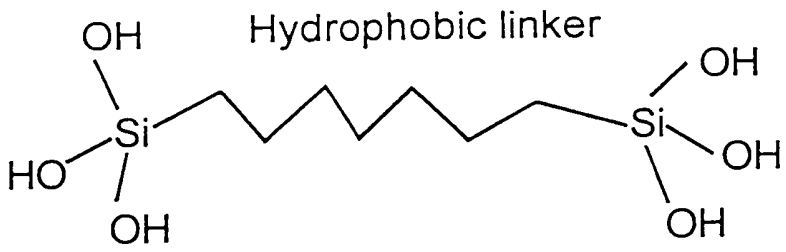


Figure 6

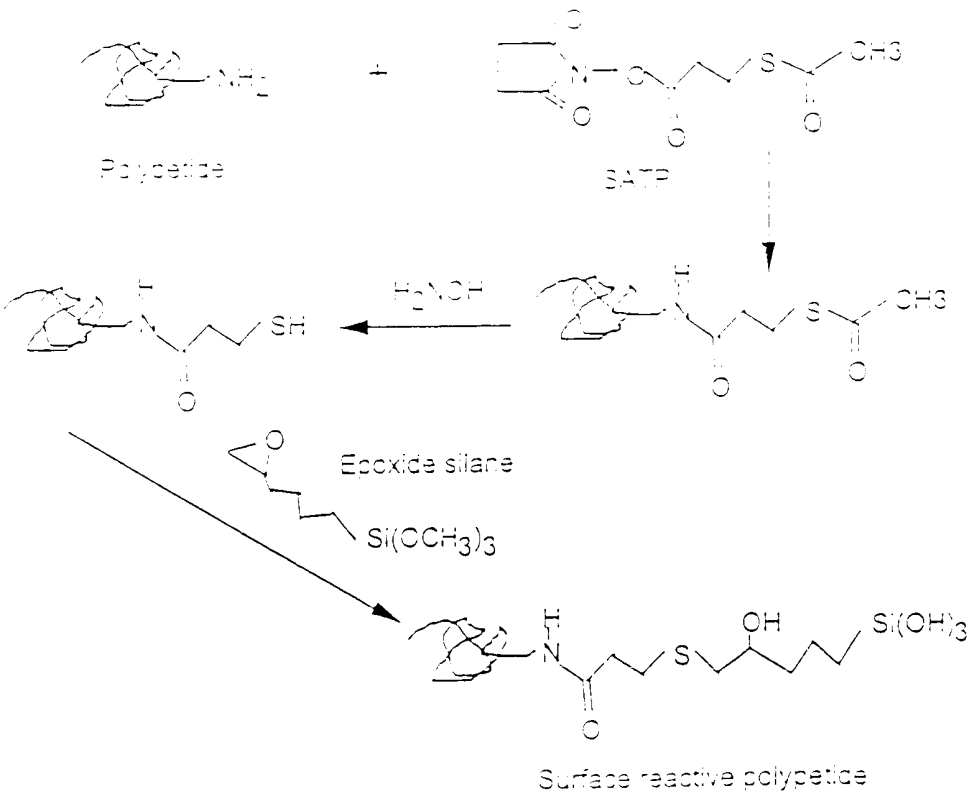

Polypeptide
SATP
H_2NOH
SH
Epoxide silane
$Si(OCH_3)_3$
OH
$Si(OH)_3$
Surface reactive polypeptide

FIGURE 7